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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,582	07/14/2004	Troy Clutton	010100-120	9318
21836 7590 08/22/2007 HENRICKS SLAVIN AND HOLMES LLP SUITE 200 840 APOLLO STREET EL SEGUNDO, CA 90245			EXAMINER VASUDEVA, AJAY	
			ART UNIT 3617	PAPER NUMBER
			MAIL DATE 08/22/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/501,582	Applicant(s) CLUTTON ET AL.	
	Examiner Ajay Vasudeva	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30,32-46 and 57-76 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-17,35 and 38-46 is/are allowed.
- 6) ☒ Claim(s) 1-13,18-30,32-34,36,37 and 57-76 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

New Rejection

1. This Office action contains a non-final rejection based on new grounds. The examiner regrets the resulting inconvenience to the applicant and his counsel.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

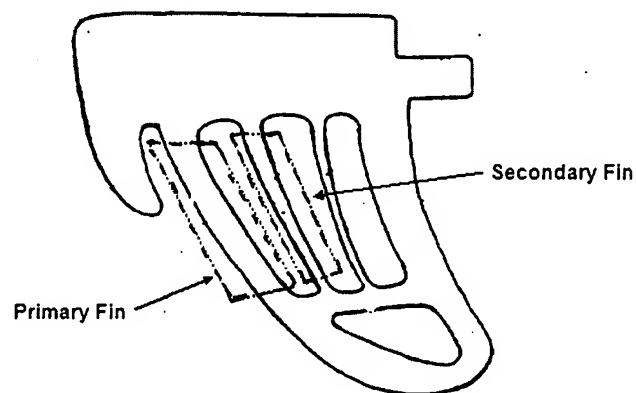
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-13, 18-30, 32-34, 36 and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by AU 9170912 A (WEBERLING).

(A) Rejection of claims 1-13, 36 and 37 based on a first interpretation of AU '912:

Weberling shows a fin assembly having a base [15]. A primary/larger fin and a secondary/smaller fin extend from the base. The secondary fin extends rearwardly from the base and is situated on the concave trailing edge side of the primary fin.

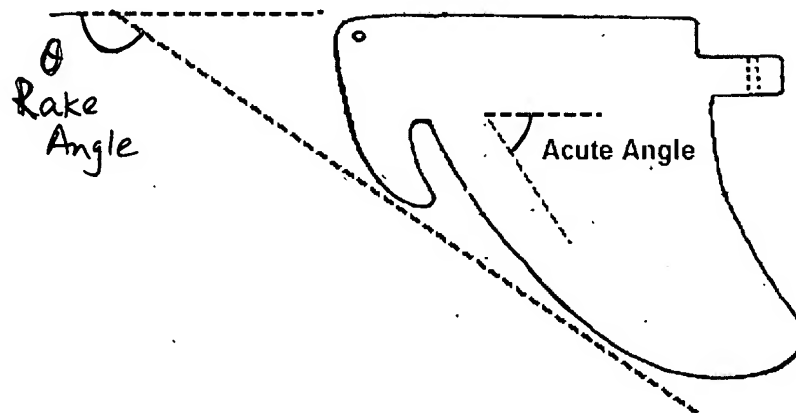


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The base and the fins are integrally formed. The leading and trailing edges of the fins are aligned. The trailing primary edge and the leading secondary edge are joined by an intermediate arcuate edge defined by the base. The arcuate edge is assumed to span a segment that is longer vertically than horizontally, thereby defining an ellipsoid shape that would provide it with varying radius. The fins include respective pairs of opposite faces that extend between the leading and trailing edges.

(B) Rejection of claims 18-30, 32-34 and 37 based on a second interpretation of AU '912:

AU '912 shows a fin assembly, having a primary fin [12] and a secondary fin [16] extending from a base [15]. The base and the fins are integrally formed.



Re claim 18, the primary fin extends forwardly from the base at an acute angle. The claims do not positively recite the fin assembly as being attached to a surfboard, and further, the fin assembly can be attached in any orientation on a surfboard.

The limitation "primary fin ... has a leading edge away from the acute angle" (emphasis added) does not necessarily mean that the leading edge of the primary fin is

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extending away from the acute angle. The limitation "away from" has been broadly interpreted to mean that the leading edge of the primary fin is positioned distant/farther from the acute angle. In the present case, if the angle is measured at the point where the trailing edge of the primary fin meets the base, trailing edge would be closer to the acute angle while the leading edge would be away from such acute angle.

Re the limitation "the rake angle is less than about 90 degrees" (emphasis added), it is noted that the specification does not disclose as to what range of angle is encompassed by the limitation "about 90 degrees". As such, the rake angle of AU '912 – which appears to be around 135 degrees – can be broadly interpreted to be "about 90 degrees", particularly when compared with a larger angle, such as 270 degrees. (Note: Changing the limitation to "the rake angle is less than 90 degrees" would overcome the rejection based on the second interpretation of AU '912).

Re the dependent claims, please see the detailed explanation in the previous Office action/

4. Claims 1-13, 36, 37, 57-64, 67 and 71-76 are rejected under 35 U.S.C. 102(b) as being anticipated by AU 8447182 A (FORD).

Ford shows a fin arrangement having a single extended fin box, wherein a primary fin [14] and a secondary fin [13] are both accommodated in the same extended fin box (fig. 6; page 8, lines 19-24; and claim 4). The extended fin box is considered to be the "base" of the fin assembly, and both fins are considered to be extending from the same base. The primary fin is larger than the secondary fin (fig. 6; page 6, lines 16-24). Each fin has respective leading and trailing edges. The leading and trailing edges of the fins are aligned. Each fin includes a pair of

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opposite faces that extend between the leading and trailing edges. The fins are disclosed as being accommodated in a single fin box of a surfboard (see claim 4).

Note: The claims do not positively recite a surfboard. As such, the surfboard of Ford reference can alternatively be considered as a "base".

The limitation "**integrally formed**" of claim 2 means "formed in an integral manner". Further, in accordance with the dictionary meaning, the term "**integral**" has been broadly interpreted as "**composed of parts/components that together constitute a whole**" or "**essential or necessary for the completeness**". In the present case, the extended fin box (considered to be the base) and the fins together form a whole/complete fin assembly. Therefore, the base and the fins are considered to be integrally formed, even though the base and the fins are not formed as a continuous, one-piece structure.

Similarly, regarding the phrase "**unitary fin structure**" in claim 57, the term "**unitary**" has been interpreted to mean "**of, or pertaining to, a unit or units**", wherein the "**unit**" means "**any group of things regarded as a single entity**". In the present case, even though the fin assembly comprises two fins and a base, the fin assembly itself is considered to be a single entity, and therefore, considered to be a "unitary fin structure". The term "**unitary fin structure**" has not been interpreted in a narrow context to mean a single one-piece fin structure comprising a continuous surface between all of its outer edges.

Further, Applicant may note that "...it is possible for a multi-piece invention to be unitary once the multiple pieces are fabricated together", *Transmatic Inc. v. Gulton Industries Inc. (DC EMich) 27 USPQ2d 1561*.

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Re claim 57, the fin structure/assembly comprises the base, the larger fin and smaller fin, as described above. The depth of the fin structure is greater than that of the tip of the larger fin, thereby resulting in rearward over-wrapping of the edge, or the feathering of edge. The cut-out, or the feathered portion, is therefore considered to be extending in the rear edge of the fin structure. Each of the larger and smaller fins is capable of both stabilizing as well as maneuvering functions. As such, each fin can be interchangeably considered as having at least a stabilizing fin section or a maneuvering fin section.

Re claim 59 and 60, the limitation "when installed" is a merely conditional limitation. The claims do not positively recite an attachment to a surfboard. In the present case, if the fin structure is installed on a surfboard having a longer rear section, the angle between the rearwardly-disposed section of the underside face of the surfboard and a construction line extending between a rearmost point of the stabilizing fin section and the rearmost point of the maneuvering fin section would be less than 90° . Because the front edge of the fin structure is feathered, the front edge extends rearwardly to a rounded distal tip of the maneuvering section in a compound arcuate manner, and the rear edge extends from the rounded distal tip, the rear edge having a first intermediate portion being coincident with an inner concave periphery of the feathered portion and having a second intermediate portion being coincident with a rounded tip of the stabilizing fin portion. It is also noted that the requirement of claims 59 and 60 do not necessarily have to be met when/if the fins are "not installed".

Re claims 62 and 63, at least half of the combined total sectional area defined by the base, the primary fin and the secondary fin appears to be within a third of the height of the primary fin. Therefore, $0.4 A$ is within $0.3 H$ of the base edge. Further, the cut-out portion between the secondary and primary fins appears to be greater than $0.2X$ of the combined total

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sectional area defined by the base, the primary fin and the secondary fin. Therefore, A_t is considered to be greater than $0.2 A_r$.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 65-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over AU 8447182 A (FORD).

AU '182 shows a fin structure, as claimed in claim 57. However, AU '182 is silent on the fin structure as having one or more mounting formations.

The Examiner takes an Official notice that a use of mounting protrusion for attaching fins to the surfboards is old and well known in the art. It would have been obvious for one skilled in the art at the time of the invention to use two spaced apart mounting protrusions -- at least one for each of the larger and smaller fins -- for engaging with complimentary locating formations associated with a surfboard so as to provide a secure and easy fin attachment.

Re the fin dimensions recited in claims 68-70, a person skilled in the art would have known to design the fin structure with the claimed dimensions so as to obtain an optimized performance that maximized the maneuverability and stability characteristics of the surfboard, without increasing the drag.

Response to Arguments

7. Claims 35 and 38-46 are allowed because the prior art does not show the rake angle being less than 90 degrees. In view of the definition provided in disclosure of the invention, the limitation "rake" has been interpreted as the angle formed between a planar base surface of the fin and a line that forms a common tangent to the respective rear edges of the primary (larger) and secondary (smaller) fins, the angle being measured on the side of the line that is opposite the fin.

Response to Arguments

8. Applicant's arguments filed 6/04/2007 against the prior rejection based on AU '912 (Weberling) are persuasive.

All of the Applicant's arguments with respect to claims 1-13, 18-30, 32-34, 36, 37, 57-76 have been considered but are moot in view of the new ground(s) of rejection, based on AU 9170912 A (Weberling) and AU 8447182 A (Ford).

Conclusion

9. The prior art made of record in the attached PTO Form 892, but not yet relied upon, is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ajay Vasudeva whose telephone number is (571) 272-6689. The examiner can normally be reached on Monday-Friday 12:00 -- 5:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S. Joe Morano can be reached on (571) 272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ajay Vasudeva
Primary Examiner
Art Unit 3617

Ajay Vasudeva
8/10/07